

REMARKS

Claims 1-6, 9, 13-15, 22-27, 33-35, 39-41, 83 and 89-93 are pending in this application. Claim 39 has been amended. No new matter has been introduced. Claims 2 and 23 have been rewritten in independent form to include all limitations of the base claim and of any intervening claims, as suggested in the last Office Action, and are now in condition for allowance. Applicants acknowledge with appreciation the allowance of claims 83 and 90-93.

Claims 39-41 stand rejected under 35 U.S.C. §112, second paragraph, as “being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” (Office Action at 2). In particular, the Examiner asserts that the language “‘consisting essentially of: . . . a nonaqueous composition comprising of . . .’ is indefinite because it is unclear whether the claim is open or closed to other components.” (Office Action at 2). Applicants point out that claim 39 has been amended to clarify that composition for etching consists “essentially of: propylene glycol, nitric acid and hydrofluoric acid.” Applicants submit that all pending claims are now in full compliance with 35 U.S.C. § 112.

Claims 1, 6, 9, 22, 27 and 89 stand rejected under 35 U.S.C. § 102 as being anticipated by Ogi et al. (U.S. Patent No. 5,696,384) (“Ogi”). This rejection is respectfully traversed.

The present invention relates to a non-aqueous etching mixture which consists essentially of an alcohol and at least two inorganic acids. As such independent claim 1 recites an “etching composition consisting essentially of: a non-aqueous composition of an alcohol and at least two inorganic acids.” Independent claim 1 also recites that “one of said inorganic acids is selected from the group consisting of sulfuric acid, boric acid, carbonic acid, perchloric acid and sulfurous acid.” Independent claim

9 recites an “etching composition consisting essentially of: a non-aqueous composition of an alcohol and at least two inorganic acids, wherein said inorganic acids are selected from the group consisting of nitric acid, phosphoric acid, sulfuric acid, boric acid, carbonic acid, perchloric acid and sulfurous acid.”

Independent claim 22 recites an “etching composition consisting essentially of: a non-aqueous composition of an alcohol and at least two different inorganic acids selected from the group consisting of phosphoric acid, sulfuric acid, boric acid, carbonic acid, perchloric acid and sulfurous acid.” Independent claim 89 recites an “etching composition consisting essentially of: a non-aqueous composition of an alcohol, sulfuric acid, and at least another inorganic acid.”

Ogi relates to a “Pt film-forming composition” that “comprises a dimethyl Pt(II) (N,N,N',N'-tetramethylethylenediamine) complex and an organic solvent.” (Abstract). Ogi teaches that a “Pt film is formed by applying this composition to a substrate and then subjecting the applied layer of the composition to a heat treatment.” (Abstract). Ogi also teaches that a “Pt film pattern is obtained by applying this composition to a substrate, pattern-exposing the produced applied layer of the composition to radiation, developing the exposed layer, and then subjecting the developed layer to a heat treatment.” (Abstract).

Ogi does not disclose, teach or suggest all limitations of independent claims 1, 9, 22 and 89. Ogi fails to disclose, teach or suggest an “etching composition consisting essentially of: a non-aqueous composition of an alcohol and at least two inorganic acids” (claim 1), an “etching composition consisting essentially of: a non-aqueous composition of an alcohol and at least two inorganic acids, wherein said inorganic acids are selected from the group consisting of nitric acid, phosphoric acid, sulfuric acid, boric acid, carbonic acid, perchloric acid and sulfurous acid” (claim 9), an

"etching composition consisting essentially of: a non-aqueous composition of an alcohol and at least two different inorganic acids" (claim 22) or an "etching composition consisting essentially of: a non-aqueous composition of an alcohol, sulfuric acid, and at least another inorganic acid" (claim 89).

Ogi teaches a platinum film-forming composition that "can be easily prepared by dissolving the DMPt(II)TMEDA in an organic solvent." (Col. 7, lines 31-33). Subsequent to the step of "exposing the resultant film to radiation as light, laser radiation, electron beam, or X-ray so as to provide a predetermined pattern," Ogi teaches "washing and removing the unexposed portion of the film thereby effecting development of the film." (Col. 7, lines 53-56). For the development which follows the exposure, Ogi teaches that "a solution containing hydrochloric acid, nitric acid, or sulfuric acid at a concentration in the range of 0.1 to 20% by weight in IPA or ethyl oxobutanoate can be used as a solvent." (Col. 7, lines 66-67; col. 8, lines 1-2). Thus, Ogi teaches a developing solution containing "hydrochloric acid, nitric acid, or sulfuric acid" in a specific concentration and dissolved in "IPA [isopropanol] or ethyl oxobutanoate" (emphasis added). The developing solution of Ogi contains only one of the three specified acids which are dissolved in isopropanol or ethyl oxobutanoate. As an example, in describing a method of forming the platinum layer, Ogi teaches removal of "the unexposed portion of the film with an IPA 10 wt. % hydrochloric acid solution." (Example 2, Col. 12, lines 25-26). Thus, Ogi does not disclose an etching composition consisting essentially of an alcohol and "at least two inorganic acids," as in the claimed invention (emphasis added). For at least these reasons, Ogi fails to anticipate the subject matter of claims 1, 6, 9, 22, 27 and 89, and withdrawal of the rejection of these claims is respectfully requested.

Claims 13-15 and 33-35 stand rejected under rejected under 35 U.S.C. § 103 as being unpatentable over Ogi, as applied to claims 1 and 22. Applicants submit that, as

noted above, Ogi fails to disclose, teach or suggest all limitations of claims 1 and 22. Accordingly, for at least the reasons above, the subject matter of claims 13-15 and 33-35 would not have been obvious over Ogi. Withdrawal of the rejection of these claims is also respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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